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AUTHOR Mikulecky, Larry; Lloyd, Paul
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ABSTRACT

This handbook provides guidelines for designing evaluation materials and for conducting the evaluation of workplace training programs. It includes a variety of evaluation instruments, which are described briefly in the introduction and explained in more detail in the remainder of the handbook. These evaluation instruments are included: employee interview, employee questionnaire, cloze exercise, family literacy focus group interview, checklist for English-as-a-Second-Language, classroom observation form, employee job performance ratings, and employee productivity indicators. Details are available in the introduction section for each instruction, which also includes guidelines for developing any custom-designed parts of the instrument. In the case of the employee interview, which contains open-ended questions with nonnumerical responses, guidelines are also provided for conducting the interview and for scoring the responses. (YLB)

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ED 375 264

Handbook

of Ideas for Evaluating

Workplace Literacy Programs

Larry Mikulecky and Paul Lloyd

Indiana University

U.S. DEPARTMENT OF EDUCATION
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Preface

The methods and assessment instruments that comprise this Handbook of Ideas for Evaluating Workplace Literacy Programs were developed over a period of several years. They arose out of a perceived need to have something other than a standardized reading test for evaluating learner gains in workplace programs. Standardized tests are inappropriate in this context for two reasons: they test *general* reading skills whereas workplace instruction is often job-specific, and they are unlikely to show learner gain in the short time period available for most workplace programs. Thus, in order to demonstrate what workers have learned in brief and targeted training, there is a need for job- and instruction-related measures of achievement—many of them custom-designed for each particular workplace. Therefore this Handbook consists, not only of actual instruments ready to use, but also of instructions and templates for developing instruments for particular workplace situations.

Workplace literacy programs typically have a wide variety of goals. Most are designed to improve learner abilities, but many hope also to help learners make changes in their life-styles in relation to literacy and education. This often includes increasing the practice of literacy at home and on the job, as well as helping learners build on-going education into their plans for the future. Still other workplace literacy programs aim for direct impact upon participation in quality assurance groups, quality monitoring and other productivity-related activities. The broad definition of literacy incorporated into this assessment model allows the tracking of program impacts in each of these areas.

This evaluation model, with some instruments that can be used by any program and others that need adapting to each particular program, has passed through various stages of development. Under the authors' supervision, it has been used at about 10 workplace sites during the last three years and feedback from the workplace educators using it has produced a number of revisions to both the overall structure and many of the details of procedure and wording. A version of the model was published earlier[1], and this Handbook can be seen as an up-date of the Appendices of that earlier publication.

As just mentioned, this revised set of instruments owes much to its users at various workplaces and we would like to acknowledge particularly the assistance of Denise Henard, David Mathes, Daniel O'Connell and Wilma Sheffer.

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[1] Mikulecky, Larry & Lloyd, Paul (1992). *Evaluating the impact of workplace literacy programs: Results and instruments from the NCAL Workplace Literacy Impact Project*. Philadelphia, PA: National Center on Adult Literacy. (ERIC Document Reproduction Service No. ED 348 579.)

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Introduction

This handbook provides guidelines for designing evaluation materials and for conducting the evaluation of your workplace training program. The purpose of a program evaluation is to find out whether your program is working effectively in achieving its goals. Program goals may include making employees better at their jobs, increasing employees' general education level, or raising employee morale and self-esteem.

Whatever those goals may be, a program evaluation aims to find out whether the funding allocated to your training program is money well spent.

Because of this commitment of scarce resources, it is worth taking a little trouble to find out what your training program has achieved. In order to do that, you need to evaluate the things this program was aiming to teach. That means some custom-designing of the evaluation instruments, so that the measures you use are able to show the improvements made by your program.

For example, if your training program concentrates on teaching Statistical Process Control, then the best ways to measure the effectiveness of the program are by testing employees with scenario situations based on SPC skills, and by asking their supervisors to rate their ability to carry out SPC on the job. For this class, it does not make sense to use, for example, a standardized test—which tests general ability—because it does not necessarily relate to the ideas taught in the class, and employees are likely to show minimal or no gains on such a test.

Mention of "gains" brings us to another important point in program evaluation: what level were the employees at before the program? In order to measure what the program has achieved, you need to be able to compare a pre-class assessment with a post-class assessment. So, in the sections that follow, keep in mind that the evaluation instruments will need to be used twice — before and after the program. It is essential that you use the same set of instruments in both assessments, so that you can compare them to see what your program has achieved.

To give you some ideas for ways to evaluate your training program, this handbook includes a variety of evaluation instruments, which are described briefly below and explained in more detail in the rest of the handbook. For any one program, not all the instruments (or sections within an instrument) may be relevant. Some possible options are outlined here.

1. As mentioned above in connection with Statistical Process Control, a very specific, job-related course may best be evaluated using only scenarios like those in the Employee Interview, in combination with employee job performance ratings.

2. On the other hand, if longer-term and more general literacy gains are among a course's goals, then it makes sense to include the interview and questionnaire sections on learner practices, beliefs and plans. Gains in these areas are indicators of changes in lifestyle leading to greater flexibility and life-long learning.

3. Another possible goal is increasing workers' ability to read workplace notices and newsletters. To assess changes in these skills, a prose scenario and a cloze exercise based on such workplace reading materials will most likely be appropriate.

Other combinations will probably suggest themselves to anyone reading this with a particular workplace program in mind. For instance, your program may involve some ESL workers or place an emphasis on family literacy. There are instruments in this handbook for assessing learner gains

in each of these cases. In addition, the handbook includes a classroom observation form, so that evaluators can record what happens during classes and relate teaching practices to assessment results.

The nature of the evaluation instruments in the handbook is outlined below. Details are available in the introductory section for each instrument, which also includes guidelines for developing any custom-designed parts of the instrument. In the case of the Employee Interview, which contains open-ended questions with non-numerical responses, guidelines are also provided for conducting the interview and for scoring the responses.

Employee Interview

The interview form addresses learners' beliefs, practices, processes and plans relating to reading and education. It includes open-ended questions intended to find out about learner changes in practices, beliefs and plans, which can be used as they are by most programs. In order to find out about learners' reading processes, each program needs to develop one or more scenarios of the type included here, where interviewees are asked how they go about reading, as well as questions about the content of the material.

Employee Questionnaire

The questionnaire form addresses learners' literacy practices at work and away from work, and the literacy activities of their families. Most questions can be used as they stand, but some of the workplace reading materials should be chosen to be specific to the particular workplace.

Cloze Exercise

A cloze exercise is a fill-in-the-blank test that uses a passage of prose with (usually) every fifth word removed. It tests a learner's ability to replace the missing words using the context of the passage—both its sense and its grammar. Cloze exercise scores can be related to standardized test scores, but have the advantage of being able to use a sample of the actual reading material required on the job. Thus workers' ability to read job-specific prose can be assessed using a cloze exercise.

Family Literacy Focus Group Interview

One section of the Employee Questionnaire relates to family literacy, and this focus group interview form allows evaluators to follow up in more detail the types of responses obtained there.

ESL Checklist

For programs that include an ESL component, many of the other instruments may not be appropriate, particularly for beginning ESL learners who speak little English. Therefore, it may be more appropriate for the instructors to make their own assessment of the learners' abilities, and summarize that information on a checklist like the one given here.

Classroom Observation Form

In order to be able to look at learner gains in the context of classroom practice, it is useful for an outside observer (possibly another teacher in the program) to watch some of an instructor's lessons in progress and make notes on what is happening. Then, if learners do (or do not) make gains in certain areas of the assessment, it may be possible to explain this in terms of classroom activities and emphases.

Employee Job Performance Ratings

In addition to direct testing of employee gains in skills and competencies, you will probably want to know how successfully they can apply their new knowledge back on the job. To find this out, the best way is to develop job performance rating scales in key areas, and ask supervisors (or others who are aware of individual performance) to rate the employees both before and after the training program.

Employee Productivity Indicators

Besides measuring improvement in job-specific skills, you may also want to look for indications of an increase in worker productivity, or improvements in other areas such as attendance and safety. For this, your organization probably already keeps the records you need, but you should check that they are available in a form that you can use to evaluate the employees in your program.

Finally, remember that the instruments outlined above, and described in more detail below, provide a menu from which you can make a selection. And the most important factor in making such choices is the match between the instrument's purpose and your instructional goals: test what you are teaching and you are more likely to find out how successful that teaching has been.

Employee Interview: Guidelines for Custom-Designing and Interview Form

What modifications are needed?

The Interview protocol that follows addresses learners' beliefs, practices, processes and abilities, and plans related to literacy activities. Most programs can use the supplied questions concerning **beliefs, practices** and **plans** without any modifications.

For the **process and ability** section, job-specific modifications are required to determine how well employees read material from a particular workplace. You want to know how well employees use materials from your workplace, so you should select key items related to your own program's goals, such as:

- a company newsletter,
- a key graph or chart,
- an instruction sheet,
- a page from a manual.

Using this material, develop two or three scenarios of realistic questions and tasks, to test the employees' understanding of how to use the material on the job. First, ask them how they would go about reading the material, to discover what reading processes they use. Then, in order to address a wide range of abilities, choose questions on the contents of the material that range from plain factual (the answer can be found in the material) to those requiring inference and application (the employee must make use of the information found).

You will see from the examples given in the Interview below that a good way to achieve this is to include:

- one process question—what is going on in the learner's mind (you can use the format in our examples),
- two factual questions—based strictly on the material,
- two inference questions—deductions from the material that do not rely on background knowledge,
- two application questions—relating information from the material to the learner's background knowledge (usually the employee's job).

Include a range of difficulty in these questions, finishing with an open-ended question which allows the interviewee to make a definite contribution.

Guidelines for Conducting Interviews

The employee interview addresses employees' belief, practices, processes, and plans related to workplace activities. Appropriate skills for conducting interviews are required to elicit responses from the participants. Here are some points to keep in mind.

Instructions

- Read questions clearly to the employee.
- Repeat questions if necessary.
- Make notes on the responses in as much detail as possible.
- Share what you have written to confirm responses.

Prompting

Prompting is used when employees stop after a single response. For example, while asking the employees the sorts of things they read and write, you can prompt them to give several examples.

- Read the question and then the standard prompt(s) to all employees (e.g., "Can you give me more examples?").
- Avoid overguidance, such as suggesting possible responses.
- Avoid personal interpretation and comments.
- Keep a neutral tone.

It is important to conduct the interview in exactly the same way for both the pre-test and the post-test, so that any changes in scores can reasonably be attributed to the effect of your program.

Guidelines for Scoring Interview Responses

The employee interview will result in a set of interviewer's notes for each employee. In order to measure improvements produced by your program, you need some method of comparing the pre-test and post-test responses. Described below are scoring schemes that we have used for each of the areas: beliefs, practices, processes and plans. The following pages contain some examples of the use of these scoring schemes.

Beliefs

1. Rate the self-appraisal, if the learner has made one, on a scale of 1 - 5 (i.e., 1 = poor, 3 = average, 5 = good, using 2 and 4 as needed).

2. Make a **holistic comparison*** (see below) between pre- and post-responses. Make holistic judgments according to the following criteria: the reasons given for the reported self-image, in terms of **abilities, activities and interests**.

Practices

1. Count the number of items given in each response, and compare pre- and post-test results.

2. Make a **holistic comparison*** (see below) between pre- and post-responses. Make holistic judgments according to the following criteria: **breadth, frequency and difficulty** of practices mentioned.

Processes

1. Count the number of items given in each response, and compare pre- and post-test results.

2. To make a more detailed analysis of the responses, count the number of items which fall into the following categories:

   - points of focus—parts of the page (e.g., title, bold print, picture),
   - strategies—general reading strategies (e.g., skim, summarize),
   - topics—ideas from the material (e.g., parts, sales, scrap).

Plans

For each part (1 year, 5 years and 10 years), make a **holistic comparison*** (see below) between pre- and post-responses. Make holistic judgments according to the following criteria: the **clarity, definiteness and detail** of the plans mentioned.

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* **Making holistic comparisons**

  - Read the pre-response and then the post-response.
  - Decide if the post-response is better or worse than, or about the same as, the pre-response.
  - Record changes as follows:
    "+" = better response
    "—" = worse response
    "0" = response about the same (use this one if in doubt).

Examples of Scoring for Interview Responses

Beliefs

2. How good do you consider yourself to be at reading and writing? What makes you think so?

Pre: Not very good. Not much education.
Post: I'm average. I'm not stupid. I have common sense and can read and write.

Ratings of self-appraisal: pre is 2 for "not very good"; post is 3 for "average".
Holistic comparison: + for increased valuing of abilities.

Pre: Not so good at writing, but reading is OK.
Post: Pretty good. Writing is difficult for me, but I can read OK.

Ratings of self-appraisal: pre is 3 for "not so good" combined with "OK"; post is 4 for "pretty good".
Holistic comparison: 0 for no change in reasons for self-image.

Practices

2. Tell me the sorts of things you read and write on the job during a normal week.
(*For prompt, ask*: "Can you give me more examples?")

Pre: Nothing really. I just put parts on the line.
Post: Bulletin at work. I can really read it now. The information is important. I read the magazine at work also..

Counts of items: pre is 0; post is 2 for "bulletin", "magazine".
Holistic comparison: + for increased breadth, frequency and difficulty.

Pre: Write work orders and read manuals all the time. Blueprints sometimes.
Post: Manuals, memos, forms, work orders, computer screen.

Counts of items: pre is 3 for "work orders", "manuals", "blueprints"; post is 5 for "manuals", "memos", "forms", "work orders", "computer screen".
Holistic comparison: 0 for little change in nature of reading.

Process and Ability

I am going to show you a newspaper article about your industry. I want you to explain to me how you would read it. There are many ways to read. People look at different parts of a page and think about different things when they read.

(*Show attached story:* "**Competitor Close Up**").

1. (process question)
   What would you do first, then next, then next?

   Pre: Check each heading and decide whether to go further.
   Post: Read the headings, get ideas about the companies, skim, know what they make, and know their customers.

   Count for pre is 2: "check each heading" is a point of focus; "decide whether to go further" is a strategy.
   Count for post is 5: "read the headings" is a point of focus; "get ideas about the companies" is a topic; "skim" is a strategy; "know what they make" is a topic; "know their customers" is a topic.

   [N.B. Assigning a response to one of the three categories 'focus', 'strategy' and 'topic' is not always indisputable. For example, "check each heading"—described above as a point of focus—could also be interpreted as a reading strategy (i.e., skim the headings to find out what the article is about). Because of such ambiguities, it may be better to score these Process responses by counting only the total number of items, without making a break-down into categories.]

Plans

Now I'd like to ask you about your plans. Explain how you see reading and education as part of these plans:

1. What are your plans for the next year?

Pre: Reading and writing more. Practicing.
Post: I'll start college in September, to study accounting.

Holistic comparison: + for increased definiteness and detail.

Pre: Work in a better position. Work for people who need help.
Post: I'd like a better job, secretary maybe.

Holistic comparison: 0 for no change in clarity, definiteness and detail.

EMPLOYEE INTERVIEW

Personal Information:

Name: _____Date:_____

What class are you in? _____

What job do you do? _____

I'd like to ask you some questions about reading, writing, and education. The answers to these questions will give us an idea of the way reading and writing are used here.

Beliefs

1. Describe someone you know who is good at reading and writing. What makes you choose this person?

2. How good do you consider yourself to be at reading and writing? What makes you think so?

3. Describe how you would <u>like to be</u> in terms of reading and writing. (*Prompt* : Could you give me some examples?)

Practices

1. Tell me the sorts of things you read and write away from work during a normal week.
   (*For prompt, ask*: "Can you give me more examples?")

2. Tell me the sorts of things you read and write on the job during a normal week.
   (*For prompt, ask*: "Can you give me more examples?")

Process and Ability: Article Example

Competitor Close Up

I am going to show you a newspaper article about your industry. I want you to explain to me how you would read it. There are many ways to read. People look at different parts of a page and think about different things when they read.

(*Show attached story:* "**Competitor Close Up**").

1. (process question)
   What would you do first, then next, then next?

(Thank the learner and read back what you have written to confirm the response.)

Now go ahead and read the article. (*Wait . . .*)

Now I am going to ask you some questions about the article.

2. (easy factual question)
   How many employees does ASMO have in Statesville?
   (Answer: 400. *Listed in article.*)

3. (harder factual question)
   What is the only company that does not mention customers?
   (Answer: BG Automotive Motors, Inc. *Requires the interviewee to look at all "customers" in the article.*)

4. (easy inference question)
   From the information provided about products, what do all four companies have in common?
   (Answer: All of them make some sort of motor. *Requires the interviewee to search for commonalities not readily apparent.*)

Process and Ability: Article Example (cont.)

5. (harder inference question)
Which of the companies listed is closely related to Japan and why do you think so?
(Answer: ASMO or Jideco. Each has Japanese plants listed and each sells to many Japanese affiliates and main customers. *Requires looking at two pieces of information and drawing deductions based on what is provided.*)

6. (harder application question)
What company makes products closest to your job at this facility? Why do you say so?
(Answer: Relate a product on the list to what the employee makes. *Requires the employee to sort through the information and then to apply it to his/her background knowledge.*)

7. (easy application question to end the section)
From this list, which company pays the least amount to its workers? How does this relate to your wages at Delco?
(Answer: ASMO. It's more or it's less than what I get paid here. *Requires the employee to apply the information to his/her background knowledge, but allows him/her to contribute more.*)

Competitor Close-Up: A Year in Review

Throughout the year, the **Delco Doings** has brought you profiles on the companies trying to take a bite out of our business and our profits. Sometimes there were success stories, when Rochester Operations met the challenge and came out on top. Other times we had to face the fact that there are companies in Asia, Europe, and right here at home that are reaching the market better, faster or with lower prices.

Here's a quick recap of the competitors we've covered this year.

ASMO, Inc.
Location: Battle Creek, Michigan; Statesville, North Carolina; Kosai City, Japan.
Affiliate: Nippondeso
Products: wiper systems, windshield washer systems, power window lifts, antennas, retractable and blower motors.
Main Customers: Nippondeso, Ford, Chrysler, General Motors, and every Japanese transplant except Nissan.
Number of Employees: Battle Creek, 130; Statesville, 400.
Total Wage and Benefit Cost/Hour: $9.58

Jideco
Location: Bardstown, Kentucky;Yokohama City, Japan; Nine production facilities throughout Japan
Affiliates: Hitachi (24%), Nissan (21%)
Products: wipers, transmissions, reservoirs arms and blades, wiper motors, and others. Control-- wiper switches and others. Motors -- power seat sliders, power window, door lock, blower and engine cooling motors and others.
Accessories: air compressors, power window kits, door locks, rain-sensing intermittent wiper controls and others.
Main Customers: Nissan, Isuzu, Honda, Mitsubishi, Mazda, and Suzuki.
Number of Employees: Bardstown, 60 in 1987
Total Wage and Benefit Cost/Hour: $10.27

Power Motion
Location: Two plants in London, Ontario
Parent: Siemans Automotive of West Germany
Products: air moving motors (5,250 armatures a day)
Main Customer: GM of US & Canada
Number of Employees: 200 at main facility in London, Ontario
Total Wage and Benefit Cost/Hour: $11.50 (U.S. equivalent)

BG Automotive Motors, Inc.
Location: Hendersonville, TN.
Parents: Bosch Corporation and General Electric Company
Products: 20 different small motors including: engine cooling, modular wipers, door lock, seat back, head rest, sun-roof, washer pump, head lamp, power window.
Number of Employees: 275
Total Wage and Benefit Cost/Hour: Unknown at this time.

Every day another company steps into the automotive arena ready to try to take away our customers. Rochester Operations has an extensive communication network to keep employees informed about our competitors and what we're doing to stay ahead. Look to **Delco Doings** to give you the information you need to help keep Rochester Operations competitive in the '90s.

From: **Delco Doings**, December/January, 1991, p.2.

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Process and Ability:. Graph Example

Production Problems

I am going to show you a graph. I want you to explain to me how you would read it. There are many ways to read. People look at different parts of a page and think about different things when they read.
(*Show attached graph.*" **Production Problems**").

1. (process question)
What would you do first, then next, then next?

(*Thank the learner and read back what you have written to confirm the response.*)

Now go ahead and read the article. (*Wait* . . .)

Now I am going to ask you some questions about the graph.

2. (easy factual question)
What is the total number of culls?
(Answer: 149. *Shown at top of graph.*)

3. (harder factual question)
What time period is covered in this chart?
(Answer: one week or week one in May. *Shown at top of graph in abbreviated form.*)

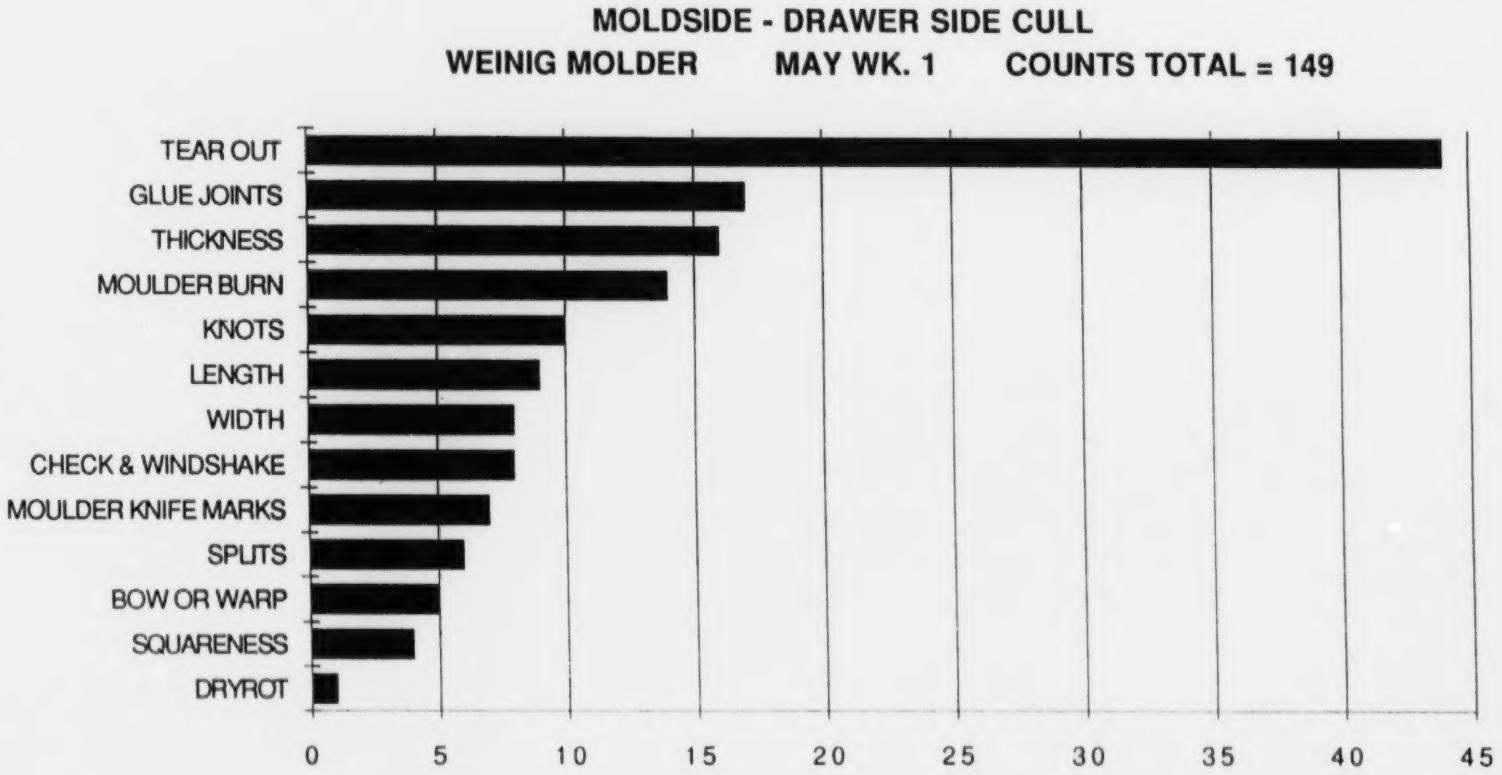
4. (easy inference)
What is the biggest problem here?
(Answer: tear outs. *Longest bar on graph.*)

Process and Ability: Graph Example (cont.)

5. (harder inference)
Find 3 types of problem involving measurement.
(Possible answers: thickness, length, width, squareness. *Requires selection from list at left of graph.*)

6. (easy application question)
Pick one problem and suggest at least one cause for that problem.
(Possible answers: For example, tear outs are caused when the wood gets caught in the machine and is gouged; moulder burn is caused by wood getting caught in the machine and being burned. *Uses interviewee's job-related knowledge.*)

7. (more difficult application question)
Pick a second problem and suggest both a cause and a solution for the problem.
(Possible answers: tear outs, caused when the wood gets caught in the machine and is gouged, can be repaired with wood filler and sanding; or moulder knife marks can be caused by gouging of the wood in carving it and can be repaired if you can get at the gouge and sand it and provided the finish hasn't already been applied. *Uses interviewee's job-related knowledge in more depth.*)


MOLDSIDE - DRAWER SIDE CULL
WEINIG MOLDER MAY WK. 1 COUNTS TOTAL = 149
TEAR OUT
GLUE JOINTS
THICKNESS
MOULDER BURN
KNOTS
LENGTH
WIDTH
CHECK & WINDSHAKE
MOULDER KNIFE MARKS
SPLITS
BOW OR WARP
SQUARENESS
DRYROT
0
5
10
15
20
25
30
35
40
45

Process and Ability: Procedure/Job Aid Example

OSHA CARD

The government has safety regulations and special labels in many workplaces. I am going to show you a safety card that many employees in America must keep in their pockets while working. This card shows how to understand safety labels.
I want you to explain to me how you would read it. There are many ways to read. People look at different parts of a page and think about different things when they read.
(*Show attached card* , "**OSHA** ").

1. (process question)
   What would you do first, then next, then next?

(*Thank the learner and read back what you have written to confirm the response.*)

Now go ahead and read the article. (*Wait* . . .)

Now I am going to ask you some questions about the card.

2 (easy factual question)
What should you do when you see the letter "x"?
(Answer: Ask my supervisor. *Directly explained in the text*)

3. (harder factual question)
What do all the symbols in "k" represent?
(Answer: airline hood or mask, gloves, a suit and boots.
Answers are in the text, but are more difficult to find.)

4. (easy inference)
What is the most common type of protection from "A" to "K"?
(Answer: gloves. *Requires the interviewee to look through several parts of the text and then to generalize the information*)

Process and Ability: Procedure/Job Aid Example (cont.)

5. (harder inference)
   Name all the letters which refer to severe hazards. How did you tell this?
   (Answer: F, H, J, K. Top of the table says "4 severe hazard: 4 probably means 4 pictures. These letters have 4 pictures. *Requires the interviewee to make deductions between different parts of the card.*)

6. (harder application)
   If a supervisor says you are about to do a job that requires sanding, which protective items would you choose?
   (Answer: safety glasses and a dust respirator. Optional: gloves, combination dust/vapor respirator and a face shield. *Requires the interviewee to interpret the information on the card and to relate it to a real-life situation.*)

7. (easy application question to end the section)
   Give me two examples of how you or someone you know could use this card.
   (Answer: Must give 2 examples and list protections. *This is more open-ended and allows the interviewee to contribute based on his/her job background..*)

Hazardous Materials Identification System

HAZARD INDEX

4 Severe Hazard
3 Serious Hazard
2 Moderate Hazard
1 Slight Hazard

0 Minimal Hazard

• An asterisk (*) or other designation corresponds to additional information on a data sheet or separate chronic effects notification.

PERSONAL PROTECTION INDEX

A

B

C

D

E

F

AMERICAN LABELMARK, Chicago, IL 60646 NC-EC

G

H

I

J

K

X Ask your supervisor for specialized handling directions

Safety Glasses | Splash Goggles | Face Shield | Airline Hood or Mask | Gloves

Synthetic Apron | Dust Respirator | Vapor Respirator | Combination Dust & Vapor Respirator

Full Protective Suit | Boots

' 1981 National Paint & Coatings Association

Plans

Now I'd like to ask you about your plans. Explain how you see reading and education as part of these plans:

1. What are your plans for the next year?

2. What are your plans for the next 5 Years?

3. What are your plans for the next 10 Years?

Employee Questionnaire: Guidelines for Custom-Designing and Questionnaire Form

What modifications are needed?

The Questionnaire protocol that follows addresses learners' literacy practices at work and away from work, and the literacy activities of their families. Most programs can use the supplied questions concerning:

- **practices at work**
- **practices away from work**
- **family**

with few modifications.

In the section on **practices at work,** the majority of questions should apply to most industries and thus need no changes. However, items 7-10 (job order form, route sheet, computer screen, blueprint) may not apply to your workplace and should be changed to site-specific reading materials, such as warning labels, procedures, product lists, etc. Actual names may differ from site to site.

When you choose these last 4 items, select a mix of:

- prose and graphic materials (e.g., a note from a supervisor, and a blueprint)
- easy and difficult reading materials (e.g., simple suggestion forms and more complex benefit information)

INSTRUMENT EXAMPLE: LEARNER QUESTIONNAIRE

Name: _____ Date: _____

Education: ___ (last year completed) Training: _____

Age: _____ Sex: ____ Children: (number) ___ (ages) _____

Questionnaire: Practices at work

Please ***check*** the number of times you have done the following:

1. **In the last 7 days** how many times have you read a company newsletter or bulletin board?

   0 1 2 3 4 5 6 7 8 9 10+

2. In the last 7 days how many times have you used a manual?

   0 1 2 3 4 5 6 7 8 9 10+

3. In the last 7 days how many times have you read a memo or letter?

   0 1 2 3 4 5 6 7 8 9 10+

4. In the last 7 days how many times have you used a graph or chart?

   0 1 2 3 4 5 6 7 8 9 10+

5. In the last 7 days how many times have you used an instruction sheet?

   0 1 2 3 4 5 6 7 8 9 10+

Questionnaire: Practices at work (cont.)

6. In the last 7 days how many times have you written a note to a co-worker?

0 1 2 3 4 5 6 7 8 9 10+

7. In the last 7 days how many times have you used *a job order form* ?

0 1 2 3 4 5 6 7 8 9 10+

8. In the last 7 days how many times have you used *a route sheet* ?

0 1 2 3 4 5 6 7 8 9 10+

9. In the last 7 days how many times have you used a *computer screen* ?

0 1 2 3 4 5 6 7 8 9 10+

10. In the last 7 days how many times have you used *a blueprint* ?

0 1 2 3 4 5 6 7 8 9 10+

Questionnaire: Practices at work (cont.)

11. How often do you have difficulties with the paperwork in your job?

___ never ___ occasionally ___ often ___ always

12. How often do you wait for others to talk about written information, just to be sure what is in it?

___ never ___ occasionally ___ often ___ always

13. How often do you have trouble reading paperwork from management?

___ never ___ occasionally ___ often ___ always

14. When a problem arises, how often do you look for printed directions to help figure out what to do?

___ never ___ occasionally ___ often ___ always

15. How often are you able to help when someone has trouble reading something?

___ never ___ occasionally ___ often ___ always

16. How often do you talk in team or department meetings, asking questions or sharing ideas?

___ never ___ occasionally ___ often ___ always

17. How often are your ideas discussed in team or department meetings?

___ never ___ occasionally ___ often ___ always

Questionnaire: Practices away from work

Please ***check*** the number of times you have done the following:

1. **In the last 7 days** how many times have you read a newspaper?

0	1	2	3	4	5	6	7	8	9	10+

2. In the last 7 days how many times have you read mail, bills or ads?

0	1	2	3	4	5	6	7	8	9	10+

3. In the last 7 days how many times have you read a magazine?

0	1	2	3	4	5	6	7	8	9	10+

4. In the last 7 days how many times have you read a book for pleasure?

0	1	2	3	4	5	6	7	8	9	10+

5. In the last 7 days how many times have you read in order to <u>do</u> something? (For example: buy, build, cook, fix)

0	1	2	3	4	5	6	7	8	9	10+

6. In the last 7 days how many times have you discussed something you've read with another person?

0	1	2	3	4	5	6	7	8	9	10+

7. In the last 7 days how many times have you written notes to people you live with?

0	1	2	3	4	5	6	7	8	9	10+

Questionnaire: Practices away from work (cont.)

8. In the last 7 days how many books have you brought into your home, either bought or borrowed?

0 1 2 3 4 5 6 7 8 9 10+

9. In the last 7 days how many times have you read the following types of books ?

mystery: __ times how-to books: __ times

novels: __ times factual books: __ times

poetry: __ times encyclopedia: __ times

Bible: __ times comic books: __ times

other types: _____ __ times

_____ __ times

_____ __ times

10. When you're waiting in an office, how often do you read magazines?

___ never ___ occasionally ___ often ___ always

11. How often do you make a shopping list before you go to the store?

___ never ___ occasionally ___ often ___ always

Questionnaire: Family

Only answer the following questions if you have a child between the ages of 3-17 at home.

Please answer for your youngest child in this age group and please fill in only one answer per question:

1. This child is ____ years old.

2. **In the last 7 days** how many times has your child looked at or read books or magazines?

   0 1 2 3 4 5 6 7 8 9 10+

3. In the last 7 days how many times has your child seen you reading or writing?

   0 1 2 3 4 5 6 7 8 9 10+

4. In the last 7 days how many times have you helped your child with homework and/or with school projects?

   0 1 2 3 4 5 6 7 8 9 10+

5. In the last 7 days how many times have you read or looked at books with your child or listened to him/her read?

   0 1 2 3 4 5 6 7 8 9 10+

6. In the last 7 days how many times has your child asked to be read to?

   0 1 2 3 4 5 6 7 8 9 10+

7. In the last 7 days how many times has your child printed, made letters, or written?

   0 1 2 3 4 5 6 7 8 9 10+

Questionnaire: Family (cont.)

8. **In the last month** how many times has your child gone to a public library?

0 1 2 3 4 5 6 7 8 9 10+

9. In the last month how many times have you participated/helped out in your child's school?

0 1 2 3 4 5 6 7 8 9 10+

10. In the last month how many times have you hung up or displayed your child's reading and writing efforts?

0 1 2 3 4 5 6 7 8 9 10+

11. In the last month how many times have you bought or borrowed books for your child?

0 1 2 3 4 5 6 7 8 9 10+

12. *(Please circle only one.)*
I expect my child to finish at least:

6th grade 9th grade high school 2-year college 4-year college

Cloze Exercise: Guidelines for Custom-Designing and Example Tests

The cloze procedure is based on the psychological principle of closure, which is the human tendency to recognize and complete a pattern or sequence. It involves replacing missing words in a reading passage. This procedure can assess the ability of employees to comprehend the passage. Cloze test scores correlate very highly with standardized reading test scores. Cloze tests can be made from local workplace materials in the following way.

1. Select a job relevant passage of 150-200 words.

2. Leave the first and last sentences intact.

3. Starting with the second sentence, omit every fifth word. This will give about 25 blanks. Replace all omitted words with the same sized blank line, 13-15 spaces is typical.

4. Employees are to read the passage and to fill the blanks with their best guess at the word removed.

5. Instructions for the cloze test should suggest employees read the entire text before attempting to fill in the blanks and should encourage employees to answer all questions even if they have to guess. It is rare for anyone to know more than 50% of the blanks.

6. Avoid controversial or emotional topics, and topics requiring technical knowledge. Scores for such materials are less valid.

Name _____ Date _____

CLOZE Exercise

In a cloze exercise, you try to guess which words are missing. For example, in the sentence below, a word is missing.

She looked before she _____ the street.
A good guess for the missing word is "crossed."
She looked before she *crossed* the street.

In the story below, try to guess and replace the missing words. Don't expect to get them all. Some are nearly impossible.

G.M Designs Safety for All Ages

We all like to think about the old days. Life seemed simpler and, in some ways, better then. But when it comes to _____, the good old days _____ offer the same degree _____ safety as today's cars _____ trucks. Advancements in technology _____ the G.M. vehicle you _____ today among the safest _____ the world. Each G.M. _____ and truck is backed _____ thousands of dedicated men _____ women who care about _____ safety of their customers. _____, as G.M. customers themselves, _____ have a stake in _____ G.M. vehicles the highest _____ quality and reliability.

And _____ you're wondering if safety _____ improved in recent years, _____ this: The classic 1955 _____ would require more than _____ major changes or additions _____ hundreds of incremental changes _____ be as safe as _____ vehicles.

From: Kilborn, C. GM Today (November/December, 1990), page 1.

Cloze Exercise Answer Key

G.M Designs Safety for All Ages

We all like to think about the old days. Life seemed simpler and, in some ways, better then. But when it comes to *automobiles*, the good old days *didn't* offer the same degree *of* safety as today's cars *and* trucks. Advancements in technology *make* the G.M. vehicle you *purchase* today among the safest *in* the world. Each G.M. *car* and truck is backed *by* thousands of dedicated men *and* women who care about *the* safety of their customers. *And*, as G.M. customers themselves, *they* have a stake in *making* G.M. vehicles the highest *in* quality and reliability.

And *if* you're wondering if safety *has* improved in recent years, *consider* this: The classic 1955 *Chevrolet* would require more than *60* major changes or additions *and* hundreds of incremental changes *to* be as safe as *today's* vehicles.

Name or ID#_____ Date _____

CLOZE Exercise

In a cloze exercise, you try to guess which words are missing. For example, in the sentence below, a word is missing.

She looked before she _____ the street.

A good guess for the missing word is "crossed."

She looked before she *crossed* the street.

In the story below, try to guess and replace the missing words. Don't expect to get them all. Some are nearly impossible.

Two more teams on the self-directed journey

Our workplace is taking on more change daily. So are the skills that all our employees must have in order to change with it. It is getting to be _____ essential each day that _____ skill gaps be filled _____ our small business can _____ a source of competitive _____ .

The changes all companies _____ expect over the next _____ -- a shrinking labor force, _____ demand for workers in _____ jobs, and increasingly competitive _____ markets -- will require businesses _____ all sizes to strengthen _____ employee skills and training _____

We believe that our _____ firm can remain competitive _____ the large firm by _____ a more flexible training _____ education program. We hope _____ be better than the _____ firm in adapting an _____ previous training experiences to _____ company's needs.

Two more _____ are now involved in self-directed _____ team training. They are _____ Green Team and the _____ Team. They join the Orange Team, which completed their sessions last year.

Cloze Exercise Answer Key

Two more teams on the self-directed journey

Our workplace is taking on more change daily. So are the skills that all our employees must have in order to change with it. It is getting to be ___more___ essential each day that ___the___ skill gaps be filled ___so___ our small business can ___remain___ a source of competitive ___strength___.

The changes all companies ___can___ expect over the next ___decade___ -- a shrinking labor force, ___more___ demand for workers in ___technical___ jobs, and increasingly competitive ___world___ markets -- will require businesses ___of___ all sizes to strengthen ___their___ employee skills and training ___programs___ .

We believe that our ___small___ firm can remain competitive ___with___ the large firm by ___having___ a more flexible training ___and___ education program. We hope ___to___ be better than the ___large___ firm in adapting an ___employee's___ previous training experiences to ___the___ company's needs.

Two more ___teams___ are now involved in self-directed ___work___ team training. They are ___the___ Green Team and the ___White___ Team. They join the Orange Team, which completed their sessions last year.

Name or ID#_____ Date _____

CLOZE Exercise

In a cloze exercise, you try to guess which words are missing. For example, in the sentence below, a word is missing.

She looked before she _____ the street.

A good guess for the missing word is "crossed."

She looked before she *crossed* the street.

In the writing below, try to guess and replace the missing words. Don't expect to get them all. Some are nearly impossible.

Safety Rules

1. For your welfare, all injuries, no matter how slight, incurred on Company premises must be reported immediately to your supervisor. The services of a physician _____ available and will be _____ as required. Failure to _____ such injuries may cause _____ difficulties and could affect _____ Workingmen's Compensation benefits.

2. Wear _____ and shoes suitable to _____ work. Open toed or _____ top shoes are not _____ . Shorts are not permitted. _____ are required.

3. Dust your _____ only with an air _____ equipped with an air _____ nozzle.

4. Keep fire equipment _____ its proper place and _____ all fire rules.

5. Learn _____ lift properly. Keep your _____straight and use your _____ to avoid strain.

6. All _____ guards should be kept _____ place. Unsafe machine guards _____ be reported to your _____ at once. No guard _____ be removed without the _____ of your supervisor.

7. Do _____ repair machinery when it _____ in operation. Stop it and fix the switch so that it cannot be accidently turned on.

Cloze Exercise Answer Key

Safety Rules

1. For your welfare, all injuries, no matter how slight, incurred on Company premises must be reported immediately to your supervisor. The services of a physician ___*are*___ available and will be ___*obtained*___ as required. Failure to ___*report*___ such injuries may cause ___*medical*___ difficulties and could affect ___*your*___ Workingmen's Compensation benefits.

2. Wear ___*clothing*___ and shoes suitable to ___*your*___ work. Open toed or ___*canvas*___ top shoes are not ___*permitted*___. Shorts are not permitted. ___*Shirts*___ are required.

3. Dust your ___*clothes*___ only with an air ___*hose*___ equipped with an air ___*restricting*___ nozzle.

4. Keep fire equipment ___*in*___ is proper place and ___*obey*___ all fire rules.

5. Learn ___*to*___ lift properly. Keep your ___*back*___ straight and use your ___*legs*___ to avoid strain.

6. All ___*machine*___ guards should be kept ___*in*___ place. Unsafe machine guards ___*should*___ be reported to your ___*supervisor*___ at once. No guard ___*should*___ be removed without the ___*permission*___ of your supervisor.

7. Do ___*not*___ repair machinery when it ___*is*___ in operation. Stop it and fix the switch so that it cannot be accidentally turned on.

Family Literacy Focus Group Interview

This interview form is designed to be used with a group of learners as the basis for a discussion about family literacy. It has been found that the comments of one member of the group will stimulate the thoughts of others, producing a wider range of ideas than will individual interviews.

Family Literacy Focus Group Interview

1. Why do you think some children learn to read and write well in school and others don't?

2. What do you think parents can do to help their children learn to read and write better?

3. What kinds of reading or writing materials do you keep at home for your children?
(i.e., letter blocks, flashcards, paper, pens, chalkboard, books, magazines, comics, cassettes with books, encyclopedia, dictionary, newspapers, etc)

4. What reading or writing activities do you do with your children? (i.e., visit library, hear stories, read to them, watch educational television, look at magazines or books with children, point out words to them, play school, show them how to read or write, etc)

5. At home, what reading or writing do your children see you doing? (i.e. books, magazines, papers, recipes, directions, letters, lists, notes, etc.)

6. What activities are you involved in at your child's school? (i.e., parent/teacher meetings, school fund-raisers, committees, notes or letters, informal talks when collecting child, assist in classroom, help child read at home, etc)

7. Have you begun anything new related to reading and writing since you started classes here?

a. Materials

b. Activities

c. Modeling

d. School

ESL Checklist

The ESL checklist is designed for teachers to reflect upon the level of competence each student is demonstrating. Teachers will be able to note individual areas of strength and weakness. This form is helpful both in planning instruction and in suggesting areas for the student to practice on outside of the workplace.

ESL Benchmarks and Ratings*

Learner Name_____ Teacher Name _____

Date of Rating _____

For each item, rate the learner:

3 = can do this as well or nearly as well as a native speaker
2 = can usually manage to do this, but sometimes has trouble
1 = can only sometimes manage to do this adequately
0 = cannot do this

Beginner Level

_____ Briefly describes feelings about work

_____ Briefly describes feelings about other life areas

_____ Follows simple directions

_____ Asks for clarification if something is not understood

_____ Reads alphabet in English

Word recognition:

_____ has access to dictionary/understands dictionary use

_____ uses dictionary

_____ uses roots, prefix, suffix

_____ uses context

_____ Looks up simple information (phone book, dictionary)

_____ Reads simple signs

_____ Begins short journal entries

* Modified from Bronstein, E. (1991) Benchmarks and student learning profile for the workplace ESL program of the Labor Education Center at Southeastern Mass. University

Intermediate Level

Oral

_____ Discusses feelings about work with some elaboration

_____ Discusses feelings about other life areas with some elaboration

_____ Gives/follows instructions at work

_____ Gives/follows instructions in other life areas

_____ Asks for clarification if something is not understood

_____ Discusses industrial specific diseases/illnesses

_____ Describes/reports dangerous conditions

_____ Offers suggestions to supervisor

Reading

_____ Uses dictionary (_____ bilingual _____ English-English)

_____ Locates own reading material in newspapers

_____ Understands literal level of text

_____ Infers information not explicitly stated

_____ Draws conclusions from reading

Writing

_____ Fills out more complex forms

_____ job application _____ social security _____ insurance

_____ other application forms (library card, courtesy card, credit card)

_____ Writes short notes/memos (_____ at work
_____ out of work)

_____ Writes journal entries (dialogue journal)

_____ Uses correct punctuation

Advanced Level

Oral

_____ Discusses feelings with more elaboration

_____ Asks for clarification if something is not understood

_____ Gives/follows more complex directions

_____ Understands and can discuss basic worker rights

_____ Understands and can discuss key contract sections

Reading

_____ Uses index/table of contents

_____ Locates own reading material in newspaper

_____ Locates own reading material in encyclopedia or other reference

_____ Reads short pieces in newspaper and simple magazines

_____ Reads short pieces in flyers, notices, factsheets

_____ Reads short self-selected material at home

_____ Reads longer pieces in books or longer articles

Writing

_____ Fills out more complex forms

_____ job application _____ social security _____ insurance

_____ other application forms (library card, courtesy card, credit card)

_____ Writes short notes/memos (_____ at work
_____ out of work)

_____ Observes differences in tone/register between formal and informal writing

_____ Writes longer journal entries/responds to entries

Classroom Observation Form

The classroom observation form serves as a guide for recording notes about the activities actually occurring in the classroom. It is divided into columns reflecting the time in five minute intervals, the actual activities of both teacher and student, and comments about the overall class. The form suggests items the observer might wish to note.

Classroom Observation

Time	Student Activity	Teacher Activity	Comments
0			
5			
10			
15			
20			
25			
30			
35			
40			
45			
50			
55			

Make note of time spent by students actually reading or doing things. Also note time students spend listening to the teacher, working in small groups, or working individually. Special note should be made when teacher or student demonstrates how to do something.

Employee Job Performance Ratings: Guidelines for Custom-Designing and Example Scales

When all learners in a class have similar jobs or have the same supervisor or team leader, a set of shared job performance ratings can be developed to measure productivity. Supervisors or team leaders often have direct knowledge of employees' job performance, so it is best to develop these ratings with them. To assess the impact of training on the employees, these ratings should be used as pre- and post-indicators.

1. Ask about use of job skills.

Ask supervisors or team leaders who have employees in training to describe how top performers use information on the job. Encourage them to think of specific workers who are top performers. One might say, for example, that a top performer reads charts and responds with his own analysis, or sets machines correctly and checks settings thoroughly, or completes all job-related paperwork and tries to improve procedures. Continue to probe until you feel reasonably satisfied you have a complete list from the supervisors or team leaders. From this list, you can identify important areas (i.e., communication, problem solving, paperwork, etc.)

Next go through a three-step process in fleshing out these areas. The order of these steps is important.

2. Obtain descriptions of performance.

Ask supervisors or team leaders to:

a. describe the behavior of the top performers first;

b. then, describe the behavior of the bottom performers;

c. last, describe the average performers.

These behaviors will be used to provide descriptions and anchors for ratings. In relation to paperwork, for example, supervisors or team leaders might agree on the following descriptions:

Top: completes all job-related paperwork and tries to improve procedures;

Bottom: intimidated by job-related paperwork and does it poorly;

Average: does job-related paperwork but simply keeps pace.

As you work to develop these descriptions, new areas and categories may emerge. The supervisors or team leaders may give examples related to problem-solving or to machine setting, or some other area. These may later become additional rating scales.

3. Develop labels for performance areas.

Once the descriptions of top, bottom, and average performances are completed, work with supervisors or team leaders to develop acceptable labels for the categories. For example, labels might include items like machine setting, paperwork, communication, responsibility, and problem-solving.

4. Draft a rating scale.

After this discussion, draft a rating scale and submit it to the people you interviewed for comment and possible revision. Sometimes during revision, complex scales split to become two separate scales.

Examples of scales appear on the following pages.

Employee Assessment - Overall Rating

Please rate each employee on a scale of 1 - 10 for each aspect below.

- An average employee would be rated 5.
- A top employee would be rated 8 or higher.
- A bottom employee would be rated 2 or lower.

EMPLOYEE _____ **DATE** _____

RATER _____

COMMUNICATION

Bottom	**Average**	**Top**
doesn't talk about the job, doesn't speak at department meetings	talks about the job and offers suggestions at department meetings	talks about the job, has suggestions and shows leadership

1 2 3 4 5 6 7 8 9 10

PROBLEM-SOLVING

Bottom	**Average**	**Top**
calls supervisor on minor details or continues to work when equipment is faulty	makes minor adjustments, offers solutions to problems and calls supervisor only when necessary	can analyze job situations, make suggestions and solutions which implement change

1 2 3 4 5 6 7 8 9 10

QUALITY OF PAPERWORK

Bottom	**Average**	**Top**
paperwork provides no or limited information; illegible, poor grammar	paperwork usually acceptable; at times too brief or vague	paperwork is legible, detailed, clear and concise

1 2 3 4 5 6 7 8 9 10

SAFETY PRECAUTIONS

Bottom	Average	Top
has to be reminded about safety and does not use caution on the job	takes precautions, but sometimes overlooks small areas on the job	follows safety precautions and understands why

1 2 3 4 5 6 7 8 9 10

PROCEDURES

Bottom	Average	Top
does not follow procedure in a step-by-step process, sometimes missing areas of the job	follows procedure most of the time, occasionally missing a step	follows step-by-step procedure

1 2 3 4 5 6 7 8 9 10

MACHINE SETTING

Bottom	Average	Top
unable to set machines correctly	usually sets machines correctly, but doesn't always check settings	sets machines correctly and checks settings thoroughly

1 2 3 4 5 6 7 8 9 10

Informal Employee Job Assessment: Focus Group Interview of Supervisors

If there is not enough time or opportunity to develop formal rating scales in the manner described above, then an alternative which will give some idea of the gains produced by the training program is to conduct informal interviews with groups of supervisors or team leaders, as described below.

At the end of the training, the immediate supervisors or team leaders of the employees in the training class are interviewed as a group (of perhaps 4 or 5), in order to find out what changes they have noticed in the workplace behaviors of those employees who have just been trained. Questions could include:

1. What effects of the training class have you seen in the workers under your supervision or in your team?

   (Answers might include: more cooperative, work better in the team, take greater responsibility, improved self-confidence.)

2. What can they do now, but could not do before?

   (Answers might include: set machines accurately, check for machine errors, complete daily log, do routine work without close supervision.)

3. Has anyone else noticed that?

   (Follow up responses to Questions 1 and 2 to find out how many workers have changed in these ways.)

Employee productivity indicators

Besides measuring improvement in job-specific skills, you may also want to look for indications of an increase in worker productivity, or improvements in other areas such as attendance and safety. For this, your organization probably already keeps the records you need, but you should check that they are available in a form that you can use to evaluate the employees in your program. For example, production quality data can measure the success of the training program only if pre- and post-data for those employees in training can be isolated from that of other employees.

This section discusses several kinds of organizational records which you could use as pre- and post-measures to evaluate the impact of a workplace training program. Records include:

- Productivity indicators
- Attendance and punctuality records
- Safety records
- Productivity suggestions
- Retention and promotion records
- Records of improvement in plant-specific goals (i.e., increased participation in quality assurance activities, increased enrollment in voluntary education, etc.)

Some of these indicators occur infrequently (e.g., accidents, breakdowns, promotions). For this reason, these indicators are most useful when there are large numbers of employees in the evaluation or when pre/post comparisons cover long periods of time.

Productivity indicators

Many employers already collect data on productivity (i.e., defects, parts produced, customers serviced, complaints, etc). To be effective, information must be collected about each individual worker so changes resulting from that employee's training can be noticed. You should compile a list of productivity data currently gathered by your company. Team productivity data can be of use only when entire teams train together.

Attendance & punctuality

Sometimes training makes people want to come to work more often. Some programs have been able to demonstrate a positive impact on work attendance as a result. For this reason, it is useful to gather attendance information for both classes and work. Because absenteeism is usually infrequent, however, program impact can be influenced greatly by a single individual with many absences or by legitimate absences which influence everybody (i.e., health during flu season). For this reason, interpretation of attendance data must be done very carefully. Similar care must be taken with punctuality data — especially when only a small number of employees is involved.

Safety

In most industries, safety is a major concern for both employers and employees. Training classes often address safety issues and some programs directly support these efforts. It is difficult to demonstrate impact on safety, however, unless one collects information on large numbers of workers for a relatively long period of time before and after training.

Suggestion Forms

Most companies have suggestion boxes for collecting employee productivity and safety ideas. Employees are often more willing to express their opinions as they become more competent with reading and writing, and have experience writing suggestions forms. Some businesses also keep track of the dollar value of accepted suggestions.

Retention & promotion

Workplace training programs directly designed to support promotion or retention of employees during times of job restructuring are most likely to demonstrate impact. To determine impact, it is important to compare learners receiving training to comparable groups who did not receive training. In addition many companies have tests to determine promotion qualification. Comparing scores of program participants to other test takers or to the participants' own earlier test scores can assess impact on promotion. Similar patterns are possible in assessing who is retained during employer downsizing.